# UBB Protein, Human

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| **Cat. No.:** | HY-P71101 |
| **Synonyms:** | Polyubiquitin-B; UBB |
| **Species:** | Human |
| **Source:** | E. coli |
| **Accession:** | P0CG47 (M153-G228) |
| **Gene ID:** | 7314 |
| **Molecular Weight:** | Approximately 7.0 kDa |

## PROPERTIES

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| **AA Sequence** | M Q I F V K T L T G K T I T L E V E P S D T I E N V K A K I Q D K E G I P P D Q Q R L I F A G K Q L E D G R T L S D Y N I Q K E S T L H L V L R L R G G |
| **Appearance** | Lyophilized powder. |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. |
| **Endotoxin Level** | <1 EU/μg, determined by LAL method. |
| **Reconsititution** | It is not recommended to reconstitute to a concentration less than 100 μg/mL in $ddH_2O$. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose). |
| **Storage & Stability** | Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage. |
| **Shipping** | Room temperature in continental US;may vary elsewhere. |

## DESCRIPTION

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| **Background** | UBB protein, a pivotal player in cellular regulation, exists either covalently attached to other proteins or in a free, unanchored state. In its covalently bound forms, UBB conjugates to target proteins through isopeptide bonds, presenting as monoubiquitin, polyubiquitin chains linked via different Lys residues, or linear polyubiquitin chains initiated at the Met residue. The functions of polyubiquitin chains are diverse and dependent on the specific Lys residue involved: Lys-6-linked ubiquitin may contribute to DNA repair, Lys-11-linked is implicated in endoplasmic reticulum-associated degradation (ERAD) and cell-cycle regulation, Lys-29-linked is associated with proteotoxic stress response and cell cycle, Lys-33-linked is engaged in kinase modification, Lys-48-linked is crucial for protein degradation via the proteasome, and Lys-63-linked plays roles in endocytosis, DNA-damage responses, and NF-kappa-B activation. Linear polyubiquitin chains, initiated at Met, are linked to cell signaling. While UBB typically conjugates to Lys residues, rare instances involve conjugation to Cys or Ser residues. In its unanchored state, free polyubiquitin contributes to distinct roles, such as activating protein kinases and |

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| | participating in signaling processes. Furthermore, UBB interacts with SKP1-KMD2A and SKP1-KMD2B complexes, emphasizing its involvement in specific cellular pathways and protein interactions. |



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